

**\*DRAFT\* Agricultural Best Management Practices (BMP) Committee  
Meeting Minutes  
Friday, December 9, 2011; 10:00 a.m.  
Arizona Department of Environmental Quality, Conference Room 3175  
1110 W. Washington St., Phoenix, Arizona 85007  
Call-in Number: (800) 746-4352, pin #1828417**

**Committee members present:** Brett Cameron, Clint Hickman, Colin Kaltenbach, Eric Massey, Kevin Rogers, Dan Thelander (Chair), Tom Thompson, Jim Walworth (phone), and Bill Wiley.

**Committee members absent:** Wade Accomazzo, Glen Curtis, Earl Petznick Jr., Will Rousseau, Keisha Tatum, and Mike Terrill

**Additional attendees:** Bas Aja, Diane Arnst, Philip Bashaw, Emily Bonanni, Jo Crumbaker, Danielle Dancho, Scott DiBiase, Jeannette Fish, Joe Gibbs, Cheryl Goar, Kazi Haque, Nicole LaSlavic, Rick Lavis, Keith Studley, Rep. Amanda Reeve, Kathy Sommer, Lisa Tomczak, Rusty VanLeuven, and Nancy Wrona.

### **Welcome**

Chairman Thelander opened the meeting, noted a quorum was present, welcomed everyone and asked all attendees to introduce themselves and indicate their organization. Chairman Thelander welcomed Eric Massey, ADEQ – Air Quality Division Director, to the Governor’s Agricultural Best Management Practices Committee (hereafter Committee) as the designee for Henry Darwin, ADEQ Director.

### **Discussion & Possible Action Regarding Position for Committee Chair**

Chairman Thelander opened the floor to nominations for Committee Chair. Kevin Rogers, Committee member, moved to retain Chairman Thelander as Chair, second by Colin Kaltenbach, Committee member. Chairman Thelander asked if it is necessary for the Chair position to be filled in order to approve motions by the Committee. Lisa Tomczak, ADEQ Air Quality, said it is required for the Chair to be filled in order to approve motions. Chairman Thelander said he will accept the re-nomination but would like to discuss the issue with Committee members at a later date to nominate and elect another member as Chair. Chairman Thelander asked for additional nominations. Hearing no additional nominations or discussion, Chairman Thelander asked to approve the motion for re-nomination; all approved. Motion passed.

### **Recommendations from Technical Workgroup for Crop Operations**

The Technical Workgroup (TWG) for crop operations reviewed all forty-three BMPs. After the TWG discussed the BMPs, most were revised. Most of the BMPs were revised to clarify the definitions. BMPs that were eliminated included “Artificial Wind Barrier”, “Cross-Wind Vegetative Strips”, and “Tree, Shrub, or Windbreak Planting.” The BMPs for “Artificial Wind Barrier” and “Tree, Shrub, or

Windbreak Planting” were combined into a new BMP titled “Wind Barrier.” “Limited Activity During High-Wind Event” was split into “Limited Harvest Activity During High-Wind Event” and “Limited Tillage Activity During High-Wind Event.” The title for the “Manure Application” was changed to “Organic Material Application.” The definitions for “Regulated Agricultural Activity” and “Regulated Area” were changed to incorporate references to statutory requirements for moderate and serious nonattainment areas. Four BMP definitions were added for “Shuttle System/Large Carrier”, “Significant Agricultural Earth Moving Activities”, “Stabilization of Soil Prior to Plant Emergence”, and “Transplanting.” Language was added to the body of the rule to incorporate statutory references to the requirements for moderate and serious nonattainment areas. Rule language was added and/or revised to incorporate changes to the annual BMP reporting form and the reporting process.

Rick Lavis, Arizona Cotton Growers Association, said that since the last TWG meeting for crop operations in July 2011, several drafts of the rule have been reviewed. Editorial errors have been corrected and comments incorporated where appropriate. Mr. Massey pointed out that the current version of the proposed rule was available for this meeting but was not emailed to the Committee. Any changes are highlighted (in yellow) in the current version. The current version tracks the comments made by Mr. Lavis.

Mr. Lavis proposed that the Committee should make three motions. The Committee to approve the revisions to the BMPs and definitions as negotiated by ADEQ and the crop TWG, which are reflected in the proposed rule. The second motion should adopt the revised rule language with the exception of revisions to the annual report form for crop operations in Subsection G. Mr. Lavis said that the Committee should have further discussions regarding on that issue. He added that he does not think it is necessary to incorporate language referring to requirements for moderate and serious nonattainment areas. The distinction for those requirements are contained in the statute and do not need to be addressed in the rule. Mr. Lavis said the Committee should not propose to adopt revisions to regulated agricultural activity or regulated area. Those revisions are not needed if there is no reference in the rule to the requirements for moderate and serious nonattainment areas.

Mr. Lavis said that the Committee also needs to discuss ADEQ’s proposal to add rule language for a periodic survey. The survey looks at the previous three years of agricultural activity and is much more extensive than what currently exists in the requirements for the agricultural community. Mr. Lavis also said the proposed references to Yuma are not necessary. The statute excludes the Yuma area and the definition excludes Yuma, therefore the rule does require language referring to Yuma.

### **Discussion & Possible Action on Revisions to BMP Program for Crop Operations**

Mr. Massey stated ADEQ’s proposed changes reflect the statements made by Mr. Lavis. Some of the changes may not be necessary at this time and the statute exempts the Yuma area; however, the changes may add clarity to the rule. Mr. Massey pointed out that the proposed change could be made to the title of the rule but may not necessary within the body of the rule. Mr. Lavis said that the part of the rule discussing the annual reporting form will have to be amended to identify the number of BMPs required for the appropriate nonattainment area.

Mr. Massey said the proposed revisions would add clarity to the rule by reflecting the statute. Mr. Thelander asked if there is a risk of violating the statute if it is not reflected in the rule. Mr. Lavis said that where possible, statutory requirements are not always duplicated within rule language, but it is a matter of choice. Mr. Rogers said the TWG did not discuss some of the proposed changes, which is

why they were not recommended by the TWG. Mr. Thelander asked for questions and comments on the proposed rule.

Brett Cameron, Committee Member – Arizona Department of Agriculture, said the proposed change to the definitions of regulated area and regulated agricultural activity capture all of the requirements for areas designated as nonattainment. If the changes are not made, the rule will have to be revised once Pinal County is designated as a PM<sub>10</sub> nonattainment area. The Committee would have to meet again and go through the revision process. Mr. Massey said that a reference to the statute at this point to include any PM<sub>10</sub> nonattainment area designated after July 1, 2009, will automatically apply to Pinal County and therefore the BMP Program would automatically apply to Pinal County. Mr. Thelander said if the Committee accepts the revision to regulated area and regulated agricultural activity; any motions should include that change.

Mr. Rogers moved to accept the following changes to R18-2-610:

- ❑ Revisions as recommended by the TWG to the crop BMP definitions.
- ❑ Title for R18-2-610.01 to include reference to crop operations and remove reference to Maricopa County Portion of Area A.
- ❑ Change to the date a commercial farmer must comply with the rule (January 1, 2012).
- ❑ Add reference to the required number of BMPs for a moderate and serious nonattainment area.
- ❑ Add BMPs for transplanting and shuttle system/large carrier in tillage and harvest category.
- ❑ Add category and BMPs for significant land leveling:
  - H. A commercial farmer shall implement from the following best management practices, as described in Subsection (C) or (D), when conducting significant agricultural earth moving activities as defined in R18-2-610:*
    - 1. Apply water prior to conducting significant agricultural earth moving activities and/or time significant agricultural earth moving activities to coincide with precipitation;*
    - 2. Apply water during significant agricultural earth moving activities;*
    - 3. Limit activities during high wind events;*
    - 4. Conduct significant agricultural earth moving activities in a manner to minimize the number of passes by using equipment that is the most efficient means of moving the soil; or*
    - 5. Conduct significant agricultural earth moving activities as close to possible to planting or otherwise stabilize the soil; except for emergency maintenance purposes.*
- ❑ Revise BMPs as appropriate in all categories according to changes in the definitions.
- ❑ Add/revise rule language for record keeping and reporting:
  - I. Beginning March 31, 2013, or within 90 days after the start of a new regulated agricultural activity, whichever is later, the commercial farmer shall complete and submit a Best Management Practices Program General Permit Record Form to the Arizona Department of Agriculture. Thereafter, the commercial farmer shall also complete and submit a Best Management Practices Program General Permit Record Form to the Arizona Department of Agriculture on March 31 of each calendar year. The Best*

*Management Practice Program General Permit Record form shall include the following information:*

- 1. At least the required number of best management practices as described in Subsection (C) or (D) that the commercial farmer implemented during the previous calendar year;*
  - 2. At least the required number of best management practices as described in Subsection (C) or (D) that the commercial farmer intends to implement during the current calendar year;*
  - 3. The name, business address, and phone number of the commercial farmer responsible for the preparation and implementation of the best management practices;*
  - 4. The signature of the commercial farmer and the date the form was signed.*
- K. Records of any changes to the Best Management Practices identified in the most recently submitted Best Management Practices Program General Permit Record Form shall be kept by the commercial farmer on-site and made available for review within two business days of notice to the commercial farmer.*
- L. A person may petition the Committee to consider different practices to control PM-10 emissions not contained in either of the categories of subsections (C), (D), (E), or (F). The Committee may require on-farm demonstration trials to be conducted under the conditions established by the Committee. The proposed new practices shall not become effective unless approved by the Committee.*
- M. A commercial farmer shall maintain a record demonstrating compliance with this Section for 3 years. Records shall include a copy of the complete best management practice application to confirm implementation of each best management practice.*

- ☐ Add language indicating implementation of the BMP Program will not violate other regulations:
  - O. A commercial farmer shall ensure that the implementation of all selected best management practices does not violate any other local, state, or federal law*
- ☐ Revise references to subsections within the rule as appropriate.

Motion seconded by Tom Thompson, Committee Member. Chairman Thelander asked for additional discussion. Mr. Massey pointed out that the section pertaining to reporting is a critical component of enforceability for EPA. The issues brought forth by EPA pertain to enforceability and specificity. This affects the clarity and certainty that emissions calculations show reductions are actually occurring. EPA wants to have some way to verify that the BMPs are being implemented and the definitions are specific. Mr. Massey indicated that the language is necessary for an enforceability perspective. Instead of an application process as is conducted in San Joaquin Valley, the BMP Program could remain “notice-and-go.” Farmers would only have to submit what BMPs they implemented at the end of the year and what they intend on implementing in the coming year. This adds a mechanism so the farmers only have to submit a report once a year to identify BMPs and address enforceability. Mr. Rogers suggested separating the discussion on reporting from the rest of the rule. Chairman Thelander supported having a separate discussion on reporting.

Mr. Lavis agreed that the discussion on reporting should be separate than the rest of the rule. The language as it is written has been reviewed by the crop producer representatives and is similar to what was presented by ADEQ. The report form presented has also been reviewed by representatives of crop producers. Mr. Rogers asked if there should be a description of the form in the rule or should the form be included in the rule. Mr. Massey said there have been instances where forms have been included in rules, however, if the form changes the rule must change as well. Mr. Rogers said that will give the regulated community the advantage of not having to have this form just the items requested.

Mr. Rogers said that when the TWG reviewed the BMPs, subtle changes were made with EPA's advice so they could be more clearly understood by a layperson and an air sheriff and can have a better understanding of the BMP. Chairman Thelander asked for additional discussion. Hearing none, Chairman Thelander asked to approve the motion; all approved. Motion passed. (A full copy of the revised rule is attached.)

Mr. Rogers asked if there will be separate forms for moderate and serious areas. Over the past 10 years that the BMP Program has been implemented he has read the form and done what it says to do. If this is going work for separate areas, there should be separate forms for moderate and serious area identifying that one or two BMPs are required. Chairman Thelander said that the title of the form for Maricopa County could be "Agricultural BMP General Permit Record for the Maricopa County Nonattainment Area" and indicate that two BMPs are required. The form for Pinal County could be "Agricultural BMP General Permit Record for the Pinal County Nonattainment Area." Mr. Thompson said it could just indicate moderate or serious nonattainment area. Mr. Rogers said that a description identifying the different areas would be good to align with the rule. Mr. Massey said ADEQ will create the forms.

Chairman Thelander asked if the two different boxes on the form indicate which BMPs were implemented for the current year and if the other box will identify the BMPs a farmer plans to implement in the following year. Mr. Massey said that is correct.

### **Discussion & Possible Action on the BMP Program for Animal Operations**

Chairman Thelander asked Clint Hickman, Committee member to lead the discussion on the recommendations from the TWG for animal operations. Mr. Hickman said the TWG met many times and developed the rule under review, which contains definitions and the body of the rule. The TWG and animal industry representatives discussed the proposed rule and agreed to the rule as provided below. Robert Shuler, Shuler Legal, agreed that the final revisions proposed by both poultry and swine and ADEQ are as follows:

#### ***R18-2-611. Definitions for R18-2-611.01***

*The definitions in Article 1 of this Chapter and the following definitions apply to R18-2-611.01:*

*A. The following definitions apply to a commercial beef cattle feedlot:*

- 1. "A commercial beef cattle feedlot" means a beef cattle feedlot with more than 500 beef cattle.*
- 2. "Add moisture to pen surface" means reducing PM<sub>10</sub> emissions and wind erosion by applying at least three to six gallons per head/per day in pens occupied by beef cattle.*
- 3. "Add molasses or tallow to feed" means reducing PM<sub>10</sub> emissions by adding molasses or tallow so that it equals five percent of the total ration.*
- 4. "Aggregate cover" means gravel, concrete, recycled road base, caliche, or other similar material applied to unpaved roads or feed lanes to a depth sufficient to reduce dust generated from vehicle movement, wind or other erosive forces.*
- 5. "Animal operator" means an individual, entity, or joint operation in general control of a animal operation.*
- 6. "Apply a fibrous layer in working areas" means reducing PM<sub>10</sub> emissions by spreading shredded or deconstructed plant materials to cover loose soil.*

7. *"Bulk materials" means reducing PM<sub>10</sub> emissions by distributing or hauling grain, supplements, or mixed feeds via motorized vehicle.*
  8. *"Concrete apron" means reducing PM<sub>10</sub> emissions by using solidly formed concrete surface, at least 4 inches thick on top of the soil surface, inside the feed pen for eight feet approaching the feed bunk or water trough.*
  9. *"Control cattle during movements" means reducing PM<sub>10</sub> emissions by suppressing the animal's ability to run by driving them forward while intruding on their "flight zones" or restraining the animal's movement.*
  10. *"Cover manure hauling trucks" means reducing PM<sub>10</sub> emissions by completely covering the top of the loaded area.*
  11. *"Feed higher moisture feed to beef cattle" means reducing PM<sub>10</sub> emissions by feeding beef cattle feed that contains at least 30% moisture.*
  12. *"Frequent manure removal" means reducing PM<sub>10</sub> emissions and wind erosion by harvesting loose manure on top of the pen surface at least once every six months.*
  13. *"Higher moisture feeds" means reduce PM<sub>10</sub> emissions by feeding beef cattle feed that contains at least 30% moisture.*
  14. *"Increase manure moisture" means reducing PM<sub>10</sub> emissions by increasing the fluids consumed and excreted by cattle.*
  15. *"Pile manure between cleanings" means reducing PM<sub>10</sub> emissions by collecting loose manure surface materials, by scraping or pushing, within the confines of the surface area of the occupied feed pen to contain loose manure materials.*
  16. *"Provide shade in corral" means reducing PM<sub>10</sub> emissions by increasing stocking density and reducing animal movement by using a permanent structure which provides at least 16 square feet per animal of shaded pen surface.*
  17. *"Push equipment" means manure harvesting equipment pushed in front of a tractor.*
  18. *"Regulated agricultural activity" means a regulated agricultural activity as defined in A.R.S. § 49-457 (P)(5).*
  19. *"Regulated area" means a regulated area as defined in A.R.S. § 49-457 (P)(6).*
  20. *"Store and maintain feed stock" means reducing PM<sub>10</sub> emissions and wind erosion by storing feed stock in a covered area where the commodity is surrounded on at least three sides by a structure so that the feed stock is adequately contained.*
  21. *"Synthetic particulate suppressant" as defined in R18-2-610.*
  22. *"Use drag equipment to maintain pens" means reducing PM<sub>10</sub> emissions by using manure harvesting equipment pulled behind a tractor instead of using push equipment.*
  23. *"Wind barrier" means reducing PM<sub>10</sub> emissions and wind erosion by constructing a fence or structure, or providing a woody vegetative barrier by planting a row of trees or shrubs, perpendicular or across the prevailing wind direction to reduce wind speed by changing the pattern of air flow over the land surface.*
- B. The following definitions apply to a commercial dairy operation:*
1. *"A commercial dairy operation" means a dairy operation with more than 150 dairy cows:*
  2. *"Aggregate cover" means gravel, concrete, recycled road base, caliche, or other similar material applied to unpaved roads or feed lanes to a depth sufficient to reduce dust generated from vehicle movement, wind or other erosive forces.*
  3. *"Animal Operator" means an individual, entity, or joint operation in general control of a animal operation.*
  4. *"Apply a fibrous layer" means reducing PM<sub>10</sub> emissions by spreading shredded or deconstructed plant materials to cover loose soil in high animal traffic areas.*
  5. *"Bunkers" means below ground level storage systems for storing large amount of silage, which is*

*covered with a plastic tarp.*

6. *“Calves” means young dairy stock under two months of age.*
7. *“Cement cattle walkways to milk barn” means reducing PM<sub>10</sub> emissions by fencing pathways from the corrals to the milking barn, which are surfaces with concrete floors.*
8. *“Cover manure hauling trucks” means reducing PM<sub>10</sub> emissions by completely covering the top of the loaded area.*
9. *“Covers for silage” means reducing PM<sub>10</sub> emissions and wind erosion by using large plastic tarps to completely cover silage.*
10. *“Do not run cattle” means reducing PM<sub>10</sub> emissions by walking dairy cattle to the milking barn.*
11. *“Feed higher moisture feed to dairy cattle” means reducing PM<sub>10</sub> emissions by feeding dairy cattle one or a combination of the following:*
  - a. *Add water to ration mix to achieve a 20% minimum moisture level;*
  - b. *Add molasses or tallow to ration mix at a minimum of 1%;*
  - c. *Add silage; or*
  - d. *Add green chop*
12. *“Feed green chop” means feeding high moisture feed that contains at least 30% moisture directly to dairy cattle.*
13. *“Groom manure surface” means reducing PM<sub>10</sub> emissions and wind erosion by:*
  - a. *Flushing or vacuuming lanes daily;*
  - b. *Scraping and harrowing pens on a weekly basis; and*
  - c. *Removing manure every 4 months with equipment that leaves and even corral surface of compacted manure on top of the soil.*
14. *“Hutches” means raised, roofed enclosures that protect the calves from the elements.*
15. *“Pile manure between cleanings” means reducing PM<sub>10</sub> emissions by collecting loose surface materials within the confines of the surface area of the occupied feed pen to contain the loose manure materials.*
16. *“Provide cooling in corral” means reducing PM<sub>10</sub> emissions by using evaporative coolers under the corral shades to reduce the ambient air temperature, thereby increasing stocking density in the cool areas of the corrals.*
17. *“Provide shade in corral” means reducing PM<sub>10</sub> emissions by erecting permanent structures, which provides at least 16 square feet per animal of shaded pen surface to increase stocking density and reduce animal movement.*
18. *“Push equipment” means manure harvesting equipment pushed in front of a tractor.*
19. *“Regulated agricultural activity” means a regulated agricultural activity as defined in A.R.S. § 49-457 (P)(5).*
20. *“Regulated area” means a regulated area as defined in A.R.S. § 49-457 (P)(6).*
21. *“Silage” means fermented, high-moisture fodder that can be fed to ruminants, such as cattle and sheep; usually made from grass crops including corn, sorghum or other cereals, by using the entire green plant.*
22. *“Store and maintain feed stock” means reducing PM<sub>10</sub> emissions and wind erosion by storing feed stock in a covered area where the commodity is surrounded on at least three sides by a structure so that the feed stock is adequately contained.*
23. *“Synthetic particulate suppressant” as defined in R18-2-610.*
24. *“Use drag equipment to maintain pens” means reducing PM<sub>10</sub> emissions by using manure harvesting equipment pulled behind a tractor instead of using push equipment.*
25. *“Use free stall housing” means reducing PM<sub>10</sub> emissions by enclosing one cow per stall, which are outfitted with concrete floors.*
26. *“Water misting systems” means reducing PM<sub>10</sub> emissions from dry manure by using systems that project a cloud of very small water particles onto the manure surface.*

27. *"Wind barrier" means reducing PM<sub>10</sub> emissions and wind erosion by constructing a fence or structure, or providing a woody vegetative barrier by planting a row of trees or shrubs, perpendicular or across the prevailing wind direction to reduce wind speed by changing the pattern of air flow over the land surface.*

C. *The following definitions apply to a commercial poultry operation:*

1. *"A commercial poultry operation" means a poultry operation with more than 25,000 egg laying hens.*
2. *"Add moisture through ventilation systems" means reducing PM<sub>10</sub> emissions by using a ventilation system that is designed to allow stock to maintain their normal body temperature without difficulty while adding sufficient moisture to the air within the housing system to bind small particles to larger particles.*
3. *"Add oil and/or moisture to the feed" means reducing PM<sub>10</sub> emissions by adding edible oil and/or moisture to feed rations to bind small particles to larger particles.*
4. *"Aggregate cover" means gravel, concrete, recycled road base, caliche, or other similar material applied to unpaved roads or feed lanes to a depth sufficient to reduce dust generated from vehicle movement, wind or other erosive forces.*
5. *"Animal Operator" means an individual, entity, or joint operation in general control of a animal operation.*
6. *"Clean aisles between cage rows" means reducing PM<sub>10</sub> emissions by cleaning the aisles between cage rows at least twice every 14 days to prevent dried manure, spilled feed, and debris accumulation.*
7. *"Clean fans, louvers, and soffit inlets in a commercial poultry operation" means reducing PM<sub>10</sub> emissions by cleaning fans, louvers, and soffit inlets when the facility is empty between depopulating and populating the facility.*
8. *"Clean floors and walls in a commercial poultry operation" means reducing PM<sub>10</sub> emissions by cleaning floors and walls when the facility to prevent dried manure, spilled feed, and debris accumulation when the facility is empty between depopulating and populating the facility.*
9. *"Control vegetation on building exteriors" means reducing PM<sub>10</sub> emissions by removing, cutting, or trimming vegetation that accumulates PM<sub>10</sub> and restricts ventilation of the building.*
10. *"Enclose transfer points" means reducing PM<sub>10</sub> emissions by enclosing the points of transfer between the enclosed, weatherproof storage structure and the enclosed feed distribution system, which reduce air contact with the feed rations during feed conveyance.*
11. *"House in fully enclosed ventilated buildings" means reducing PM<sub>10</sub> emissions by utilizing fully enclosed buildings with sufficient ventilation.*
12. *"Maintain moisture in manure solids" means reducing PM<sub>10</sub> emissions by maintaining moisture in the solids sufficient to bind small particles to larger particles.*
13. *"Minimize drop distance" means reducing PM<sub>10</sub> emissions by designing the feed distribution system to minimize the distance the feed ration drops from the feed distribution system into feeders, which reduces air contact with the feed rations during feed conveyance.*
14. *"Poultry Facility" means a commercial facility where poultry, including chickens, turkeys, ducks, geese, guineas, ratites and squabs, are raised for the purpose of egg production.*
15. *"Regulated agricultural activity" means a regulated agricultural activity as defined in A.R.S. § 49-457 (P)(5).*
16. *"Regulated area" means a regulated area as defined in A.R.S. § 49-457 (P)(6).*
17. *"Remove spilled feed" means reducing PM<sub>10</sub> emissions by removing spilled feed from the housing facility at least once every 14 days.*
18. *"Stack separated manure solids" means reducing PM<sub>10</sub> emissions and wind erosion by reducing the amount of exposed surface area of manure solids.*

19. *"Store feed" means reducing PM<sub>10</sub> emissions by storing feed in structure that is enclosed and weatherproof, which reduces air contact with the feed rations during feed storage.*
20. *"Synthetic particulate suppressant" as defined in R18-2-610.*
21. *"Use enclosed feed distribution system" means reducing PM<sub>10</sub> emissions by using an enclosed feed conveyance system that distributes feed rations throughout the housing facility, which reduces air contact with the feed rations during feed conveyance.*
22. *"Use a flexible discharge spout" means reducing PM<sub>10</sub> emissions and wind erosion at the time of bulk feed deliveries to the housing units by using a flexible discharge spout on the end of the feed truck transfer auger.*
23. *"Use no bedding in the production facility" means reducing PM<sub>10</sub> emissions by not using bedding such as wood shavings, sawdust, peanut hulls, straw, or other organic material.*

*D. The following definitions apply to a commercial swine operation:*

1. *"A commercial swine operation" means a swine operation with more than 50 animal units for more than 30 consecutive days. One thousand pounds equals one animal unit.*
2. *"Add oil and/or moisture to the feed" means reducing PM<sub>10</sub> emissions by adding edible oil and/or moisture to feed rations to bind small particles to larger particles.*
3. *"Add moisture through ventilation systems" means reducing PM<sub>10</sub> emissions by using a ventilation system on that is designed to allow stock to maintain their normal body temperature without difficulty while adding sufficient moisture to the air within the housing system to bind small particles to larger particles.*
4. *"Aggregate cover" means gravel, concrete, recycled road base, caliche, or other similar material applied to unpaved roads or feed lanes to a depth sufficient to reduce dust generated from vehicle movement, wind or other erosive forces.*
5. *"Animal Operator" means an individual, entity, or joint operation in general control of a animal operation.*
6. *"Clean aisles between pens and stalls" means reducing PM<sub>10</sub> emissions by cleaning the aisles between pens and stalls at least twice every 14 days to prevent dried manure, spilled feed, and debris accumulation.*
7. *"Clean fans, louvers, and soffit inlets in a commercial swine operation" means reducing PM<sub>10</sub> emissions by cleaning fans, louvers, and soffit inlets between transfer of animal groups.*
8. *"Clean pens, floors and walls in a commercial swine operation" means reducing PM<sub>10</sub> emissions by cleaning pens, floors, and walls between transfer of animal groups to prevent dried manure, spilled feed, and debris accumulation.*
9. *"Control vegetation on building exteriors" means reducing PM<sub>10</sub> emissions by removing, cutting, or trimming vegetation that accumulates PM<sub>10</sub> and restricts ventilation of the building.*
10. *"Enclose transfer points" means reducing PM<sub>10</sub> emissions by enclosing the points of transfer between the enclosed, weatherproof storage structure and the enclosed feed distribution system, which reduces air contact with the feed rations during feed conveyance.*
11. *"House in fully enclosed ventilated buildings" means reducing PM<sub>10</sub> emissions by utilizing fully enclosed buildings with sufficient ventilation.*
12. *"Lagoon" means a liquid manure storage and treatment pond.*
13. *"Maintain moisture in manure solids" means reducing PM<sub>10</sub> emissions by maintaining moisture in the solids sufficient to bind small particles to larger particles.*
14. *"Minimize drop distance" means reducing PM<sub>10</sub> emissions by designing the feed distribution system to minimize the distance the feed ration drops from the feed distribution system into feeders, which reduces air contact with the feed rations during feed conveyance.*
15. *"Regulated agricultural activity" means a regulated agricultural activity as defined in A.R.S. § 49-457 (P)(5).*

16. "Regulated area" means a regulated area as defined in A.R.S. § 49-457 (P)(6).
17. "Remove spilled feed" means reducing PM<sub>10</sub> emissions by removing spilled feed from the housing facility at least once every 14 days.
18. "Slatted flooring" means reducing PM<sub>10</sub> emissions by using flooring that is a slotted concrete or wire-mesh floor set above a liquid manure collection pit, which allows the excrement to fall through the flooring into the liquid pit below.
19. "Sloped concrete flooring" means reducing PM<sub>10</sub> emissions by pouring concrete with a minimum of 0.25% grade inside of the barns which provides drainage and easier cleaning of floor areas.
20. "Stack separated manure solids" means reducing PM<sub>10</sub> emissions and wind erosion by reducing the amount of exposed surface area of manure solids.
21. "Store feed" means reducing PM<sub>10</sub> emissions by storing feed in a structure that is enclosed and weatherproof, which reduces air contact with the feed rations during feed storage.
22. "Store separated manure solids" means reducing PM<sub>10</sub> emissions by storing manure solids in a wind-blocked area behind a wall, structure, or area with natural wind protection to minimize blowing air movement over the manure stack.
23. "Synthetic particulate suppressant" as defined in R18-2-610.
24. "Use a flexible discharge spout" means reducing PM<sub>10</sub> emissions and wind erosion at the time of bulk feed deliveries to the housing units by using a flexible discharge spout on the end of the feed truck transfer auger.
25. "Use enclosed feed distribution system" means reducing PM<sub>10</sub> emissions by using an enclosed feed conveyance system that distributes feed rations throughout the housing facility, which reduces air contact with the feed rations during the feed conveyance.
26. "Use no bedding in the production facility" means reducing PM<sub>10</sub> emissions by not using bedding such as wood shavings, sawdust, peanut hulls, straw, or other organic material.

*R18-2-611.01 Animal Operations PM<sub>10</sub> General Permit; Moderate and Serious PM<sub>10</sub> Nonattainment Areas Except Yuma County*

- A. A commercial animal operator in a regulated area shall comply with this Section by March 1, 2013.
- B. A commercial animal operator, who begins a regulated agricultural activity after January 1, 2012, shall comply with this Section within 18 months of beginning the regulated agricultural activity.
- C. A commercial animal operator within a Serious PM<sub>10</sub> Nonattainment Area shall implement at least two best management practices from each category to reduce PM<sub>10</sub> emissions.
- D. A commercial animal operator within a Moderate PM<sub>10</sub> Nonattainment Area shall implement at least one best management practice from each category to reduce PM<sub>10</sub> emissions.
- E. A commercial dairy operation shall implement the following best management practices, as described in Subsection (C) or (D), from each of the following categories:
  1. Arenas, Corrals, and Pens:
    - a. Free stall housing;
    - b. Provide shade in corral;
    - c. Provide cooling in corral;
    - d. Cement cattle walkways to milk barn;
    - e. Groom manure surface;
    - f. Water misting systems;
    - g. Use drag equipment to maintain pens;
    - h. Pile manure between cleanings;
    - i. Feed green chop;

- j. *Keep calves in barns or hutches;*
  - k. *Do not run cattle;*
  - l. *Apply a fibrous layer; or*
  - m. *Wind barrier.*
  - 2. *Animal Waste Handling and Transporting:*
    - a. *Feed higher moisture feed to dairy cows;*
    - b. *Store and maintain feed stock;*
    - c. *Covers for silage;*
    - d. *Store silage in bunkers;*
    - e. *Increase manure moisture;*
    - f. *Cover manure hauling trucks; or*
    - g. *Do not load manure trucks with dry manure when wind exceeds 15 mph.*
  - 3. *Unpaved Access Connections:*
    - a. *Install signage to limit vehicle speed to 15 mph;*
    - b. *Install speed control devices;*
    - c. *Restrict access to thru traffic;*
    - d. *Install and maintain a track-out control device;*
    - e. *Apply and maintain pavement in high traffic areas;*
    - f. *Apply and maintain aggregate cover;*
    - g. *Apply and maintain synthetic particulate suppressant; or*
    - h. *Apply and maintain water as a dust suppressant.*
  - 4. *Unpaved Roads or Feed Lanes:*
    - a. *Install engine speed governors on feed truck to 15 mph;*
    - b. *Install signage to limit vehicle speed to 15 mph;*
    - c. *Install speed control devices;*
    - d. *Restrict access to thru traffic;*
    - e. *Apply and maintain pavement in high traffic areas;*
    - f. *Apply and maintain aggregate cover*
    - g. *Apply and maintain synthetic particulate suppressant;*
    - h. *Apply and maintain water as a dust suppressant;*
    - i. *Use appropriate vehicles; or*
    - j. *Apply and maintain pavement in high traffic areas*
- F. *A commercial beef cattle feedlot shall implement the following best management practices, as described in Subsection (C) or (D), from each of the following categories:*
- 1. *Arenas, Corrals, and Pens:*
    - a. *Concrete aprons;*
    - c. *Provide shade in corral;*
    - d. *Add moisture to pen surface;*
    - e. *Manure removal;*
    - f. *Pile manure between cleanings;*
    - g. *Increase manure moisture;*
    - h. *Feed higher moisture feed to beef cattle;*
    - i. *Control cattle;*
    - j. *Use drag equipment to maintain pens;*
    - k. *Apply a fibrous layer; or*
    - l. *Wind barrier.*
  - 2. *Animal Waste Handling and Transporting:*
    - a. *Feed higher moisture feed to beef cattle;*
    - b. *Add molasses or tallow to feed;*

- c. *Store and maintain feed stock;*
  - d. *Bulk materials;*
  - e. *Use drag equipment to maintain pens;*
  - f. *Cover manure hauling trucks; or*
  - g. *Do not load manure when wind exceeds 15 mph.*
  - 3. *Unpaved Access Connections:*
    - a. *Install and maintain a track-out control device;*
    - b. *Apply and maintain pavement in high traffic areas;*
    - c. *Apply and maintain aggregate cover;*
    - d. *Apply and maintain synthetic particulate suppressant; or*
    - e. *Apply and maintain water as a dust suppressant.*
  - 4. *Unpaved Roads or Feed Lanes:*
    - a. *Install engine speed governors on feed truck to 15 mph;*
    - b. *Install signage to limit vehicle speed to 15 mph;*
    - c. *Install speed control devices;*
    - d. *Restrict access to thru traffic;*
    - e. *Apply and maintain pavement in high traffic areas;*
    - f. *Apply and maintain aggregate cover;*
    - g. *Apply and maintain synthetic particulate suppressant;*
    - h. *Apply and maintain water as a dust suppressant; or*
    - i. *Apply and maintain oil on roads or feed lanes.*
- G. *A commercial poultry operation shall implement the following best management practices, as described in Subsection (C) or (D), from each of the following categories:*
- 1. *Arenas, Corrals, and Pens (Housing):*
    - a. *Clean fans, louvers, and soffit inlets in a commercial poultry operation;*
    - b. *Use no bedding;*
    - c. *Control vegetation on building exteriors;*
    - d. *Add moisture through ventilation systems; or*
    - e. *House in fully enclosed ventilated buildings.*
  - 2. *Animal Waste Handling and Transporting:*
    - a. *Remove spilled feed;*
    - b. *Store feed;*
    - c. *Add oil and/or moisture to the feed;*
    - d. *Use enclosed feed distribution system;*
    - e. *Use flexible discharge spout;*
    - f. *Minimize drop distance;*
    - g. *Enclose transfer points;*
    - h. *Clean floors and walls in a commercial poultry facility;*
    - i. *Clean aisles between cage rows;*
    - j. *Stack separated manure solids; or*
    - k. *Maintain moisture in manure solids.*
  - 3. *Unpaved Access Connections:*
    - a. *Install speed control devices;*
    - b. *Restrict traffic access;*
    - c. *Install and maintain a track-out control system; or*
    - d. *Install signage to limit vehicle speed to 15 mph;*
  - 4. *Unpaved Roads or Feed Lanes:*
    - a. *Install engine speed governors on feed trucks to 15 mph;*
    - b. *Install signage to limit vehicle speed to 15 mph;*



*Form by March 31<sup>st</sup> of each subsequent year. The Best Management Practices Program General Permit Record Form shall include the following information:*

- 1. At least the required number of best management practices as described in Subsection (C) or (D) that the commercial animal operator implemented during the previous calendar year;*
- 2. At least the required number of best management practices as described in Subsection (C) or (D) that the commercial animal operation intends to implement during the current calendar year;*
- 3. The name, business address, and phone number of the commercial animal operator responsible for the preparation and implementation of the best management practices;*
- 4. The signature of the commercial animal operator and the date the form was signed.*

*J. [See discussion below.]*

*K. Beginning March 31, 2013, a commercial animal operator shall maintain records demonstrating compliance with this Section and any changes to the best management practices identified in the most recently submitted Best Management Practices Program General Permit Record Form. Records shall be kept by the commercial animal operator on-site and made available for review within two business days of notice to the commercial animal operator. A commercial animal operator shall maintain a record demonstrating compliance with this Section for 3 years.*

*L. A person may develop different practices not contained in subsections (C), (D), (E), or (F) that reduce PM<sub>10</sub> and may submit such practices that are proven effective through on-farm demonstration trials to the Committee. The new best management practices shall not become effective unless approved as described in A.R.S. § 49-457 (L).*

*M. The Director shall not assess a fee to a commercial animal operator for coverage under the agricultural PM<sub>10</sub> general permit.*

*N. A commercial animal operator shall ensure that the implementation of all selected best management practices does not violate any other local, state, or federal law.*

*O. The Director shall document noncompliance with this Section before issuing a compliance order.*

*P. A commercial animal operator who is not in compliance with this Section is subject to the provisions in A.R.S. § 49-457 (I), (J), and (K).*

Mr. Shuler asked why some of the BMPs have definitions and some do not have definitions. Mr. Lavis said that issue was discussed for some of the crop BMPs and it was decided that some of the BMPs would become too specific if they had definitions and were unnecessary at this time. Danielle Dancho, ADEQ Air Quality, said that issue was discussed by the TWG and it was decided that the BMPs without definitions were self-explanatory and did not require definitions in the rule. Mr. Massey that the BMPs without definitions can have examples for implementation provided in a guidebook.

Mr. Rogers asked if the representatives for animal operations are in agreement with the revisions regarding reporting requirements for crop operations. The representatives and Committee members agreed to the final revisions regarding reporting. Chairman Thelander called for a motion to adopt the final revisions to the rule for animal operations, R18-2-611. Mr. Thompson made a motion to accept the revisions to the rule for animal operations as discussed and agreed upon. Seconded by Mr. Kaltenbach. Chairman Thelander asked for additional discussion. Mr. Shuler asked to verify if the motion included the section pertaining to a periodic survey. Mr. Massey said that a periodic survey for crop operations will have a separate discussion and the periodic survey for animal operations can be discussed at that time. Mr. Aja said that the survey was approved by the TWG and should be left in the rule. Mr. Massey said that because the rule for animal operations will be included with the 5% Plan in Maricopa County, it will not be detrimental to leave the language regarding the periodic survey out of the rule. Chairman Thelander asked to approve the motion; all approved. Motion passed.

### **Best Management Practices Periodic Survey**

Mr. Massey said that the purpose of the proposed language is to include an element that EPA has indicated is necessary regarding enforceability of the BMP Program. EPA's reference to specificity pertains to information needed to calculate emissions reductions. For industrial situations, ADEQ usually asks for this information on an annual basis. The TWG discussed whether or not it is appropriate to ask for specific details like the number of acres of crops, the types of crops grown, and the number of miles of unpaved roads. This information is not needed on an annual basis, but EPA needs some level of detail periodically in order to accurately assess emissions reductions. Mr. Massey said the animal industry discussed providing this information once every three years and the language states that beginning in 2014, ADEQ has the opportunity to request the information needed to calculate emissions reductions. This information coincides with Maricopa County's emissions inventory and provides information regarding PM<sub>10</sub> emissions data. ADEQ would be responsible for sending this survey to farmers and would request this information about the most recent calendar year. Mr. Massey said EPA may push for a more frequent survey and consider it necessary for an approvable state implementation plan. ADEQ believes that a survey every three years conducted in the context of an emissions inventory is enough information to acquire the information necessary to address issues related to specificity. The Committee has addressed issues of enforceability regarding the BMPs implemented during a calendar year and the BMPs that are projected to be implemented during the next calendar year. Mr. Massey said the only missing piece is information for calculating emissions reductions, which will be provided by the survey. ADEQ recognizes that this is more information than what is requested in the reporting form but it addresses an element that EPA may consider essential for approvability of the BMP Program.

Chairman Thelander asked if ADEQ will develop the list of producers as well as send out the survey. Mr. Massey verified that will be ADEQ's responsibility. The draft surveys for crop and animal operations provided at the meeting are examples of the information that will be requested. This information should address EPA's concerns regarding specificity and enforceability and ensure the state implementation plans are approvable. Mr. Lavis said the first draft of the report form raised the issue that requesting this information on annual basis will create undo burden on the farmers. Even though the survey is now being requested every three years, it still requires farmers to go through extensive effort to determine the number of miles of unpaved roads, acres planted, etc. Mr. Lavis said that there could be value to the survey; however, the issue needs to be discussed further by the agricultural community. Mr. Rogers said there is nothing precluding sending out the survey and asking farmers to fill it out and send it back. Mr. Rogers said there was a survey conducted about six or seven years ago and only a handful of producers responded. The periodic survey needs to be discussed with the agricultural community but it is a good idea. Mr. Rogers said the problem arises when it becomes tied to the rule and what happens when a farmers implements the BMPs but does not respond to the survey. Mr. Rogers asked if there is a penalty if a farmer does not respond to the survey. Bill Wiley, Committee Member, said it might be helpful for Mr. Massey to explain how the information is used in the total inventory and how it is used in developing a state implementation plan and what happens if the information is not obtained and the affect on the total plan.

Mr. Massey said a state implementation plan has to be developed with a comprehensive understanding of the sources that potentially contribute to emissions. An accurate understanding of emissions can help ensure regulations are put on the right sources and there can be a better understanding of what potential emissions reductions are available. Once you know what the emissions are, you can identify what emissions reductions you can take credit for. Mr. Massey said that in the absence of a survey

EPA might say that even though BMPs are being implemented, there is no way to determine and give credit for the emissions reductions from implementation of the BMP Program. EPA's technical staff cannot determine and verify that the reductions are occurring. Mr. Massey these are inventories that MAG and Maricopa County develops every three years to determine the emissions from many different areas and sources. Mr. Rogers said that one of the reasons the Committee was established was because of monitor spikes over 10 years ago that resulted in the need to understand where the emissions were coming from. Mr. Massey said the primary purpose of the survey is to provide EPA with enough information to give the proper credit for emissions reductions from the BMP Program. It would not be conducted on an annual basis so farmers will not be overwhelmed with reports. There would be approximately five questions on the survey. Location, which identifies the appropriate nonattainment area. Crop type, which helps determine the appropriate emissions factor. Acres planted, which allows for an accurate determination of total emissions reduced. Miles of unpaved roads and feed lanes, which allows farmers to provide accurate mileage instead of ADEQ staff looking at a map and making a guess. Acreage of unpaved access connections and equipment area, which allows for a proper estimation of the acreage and emissions from those areas. Mr. Massey said the periodic survey asks for more information than what is provided on an annual basis but without this information, EPA might have a difficult time giving credit for any reductions from the program. Mr. Massey said EPA might agree that ADEQ can conduct the survey every three years instead of every year because it coincides with the full emission inventory that is conducted every three years.

Mr. Rogers suggested that the periodic survey be discussed by the agricultural community before it is put into the rule and risking non-compliance if the survey is not completed. Mr. Rogers supports conducting the survey and other Committee members might also support sending out the survey every three years, but the issue should be fully discussed with the agricultural community before putting it into rule. At this time the agricultural community is willing to send in the BMP reports, which they have not had to do up until this point, but before requiring the submittal of another form, it needs additional discussion. Mr. Massey said in order to submit the rule into the 5% plan; the Committee needs to take advantage of the exempt status for the rulemaking. Mr. Massey asked if the Committee would consider including the periodic survey in the rule if ADEQ would look at the language and strike the requirement for farmers to respond to the survey. ADEQ would be able to show EPA that the surveys can be conducted. There may not be a requirement for farmers to respond to the survey, which EPA might question, but it shows that ADEQ is asking for this information.

Chairman Thelander asked how ADEQ would develop the list of producers. Mr. Massey said ADEQ would look at land use operations and use a list of locations and farmers maintained by staff. The other opportunity is to work with the Department of Agriculture (ADA). Chairman Thelander asked if a high percentage of responses would provide the necessary information and satisfy the needs of EPA. Mr. Massey said that it would be better to have a requirement for farmers to respond; however, he recognizes that the agricultural community needs additional discussion on the issue and ADEQ could help with completing the survey by working with farmers. Bas Aja, Arizona Cattleman's Association, asked what information requested in the survey is considered sensitive. Mr. Rogers said that it is not the content per se, but the issue is that the survey needs to be fully vetted by the agricultural community prior to including it in rule. Mr. Aja asked if there is an enforcement mechanism of the rule language for the survey. Mr. Rogers said the reference stating the farmer "shall complete" indicates that they must complete the survey. Mr. Aja asked if the Farm Service Agency (FSA) collects this information and if so, could that information be used. Mr. Rogers said there should be no reason why ADEQ cannot use the information from the FSA. The FSA may not have the mileage of unpaved roads but it could be measured from a map. Mr. Massey said he was not aware that some of the information is available from the FSA. Mr. Massey said that ADEQ will change the language to

eliminate the requirement for a response. Mr. Rogers asked if there is benefit for including the survey language in the rule as opposed to ADEQ having a process for sending out the survey every three years. Mr. Massey said that including the language in rule shows EPA that ADEQ will have the opportunity to gather the information. Mr. Rogers said the language could be revised to say the ADEQ shall send the survey and the farmer may respond. Mr. Massey said that would work and the survey language could be included in the rule so it can be finalized this calendar year.

Mr. Shuler asked to clarify if the language that was approved in the animal rule has a requirement for responding to the survey. Mr. Massey said any requirements will be the same as for crop operations. There are no fines associated with non-compliance with the survey; ADEQ could work with farmers to gather the information. The language pertaining to the survey can be revised so it is consistent between the crop and animal rules. Mr. Aja said when the animal workgroup did not consider it a violation if the survey was not completed. Mr. Rogers made a motion to add the following language to the crop rule:

- J. Beginning in Calendar Year 2014, and no more than once every subsequent three calendar years, the Director shall provide the commercial farmer with a Best Management Practices Program Periodic Survey. The commercial farmer may complete and submit the survey to the Arizona Department of Agriculture. The Periodic Survey shall include the following information:*
- 1. The type and acreage of each crop type planted during the calendar year that the survey is conducted;*
  - 2. The total miles of unpaved roads at the commercial farm; and*
  - 3. The total acreage of the unpaved equipment and traffic areas at the commercial farm.*

Mr. Massey seconded the motion. Chairman Thelander asked for additional discussion. Hearing none, Chairman Thelander asked to approve the motion; all approved. Motion passed.

Mr. Massey said that the animal rule should also be revised to be consistent with the crop rule. Mr. Thompson made a motion to revise the survey language in the animal rule to match the crop rule, second by Mr. Rogers. Chairman Thelander asked for additional discussion. Hearing none, Chairman Thelander asked to approve the motion; all approved. Motion passed.

### **Implementation of Revised BMP Program for Crop Operations**

Mr. Lavis said it is important to point out that there will be issues related to implementation of the changes to the BMP Program. Since the Program does not go into effect until 2013, there is a period of time to educate the growers of the revised definitions and the elements of how it will be implemented. There have been two guides and needs to be revised a third time. The revisions to the guide have to be discussed with the Department of Agriculture (ADA) because they have the funding for printing. Animal operations could develop their own guides or be included with the revisions to the crop guide. There needs to be additional discussion regarding how the annual BMP reports will be submitted to ADA and then how that information will be passed to ADEQ. The Committee needs to understand there will be a transition process to make sure the changes work.

### **Call to the Public**

Chairman Thelander made the call to the public. Ms. Tomczak noted that Don Gabrielson, Pinal

County Air Quality, provided a comment letter to the Committee, which was provided on the sign-in table. Mr. Massey asked if a small group workgroup should work on revising the guidebook. Chairman Thelander did not recall how the revisions were conducted in the past. Mr. Massey said it was his understanding that representatives of the industries were identified to work on the revisions. Mr. Rogers suggested that the TWGs work on the revisions and come back for final approval. Ms. Tomczak asked if the crop TWG should also discuss the periodic survey. Mr. Rogers said the additional discussion on the survey should wait until the issue has been discussed within the agricultural community. Chairman Thelander asked for a motion to have the Technical Workgroups for both animal and crops to work with ADEQ and ADA to revise and develop the guides and outreach for the BMP Program. Ms. Wrona made the motion for the Workgroup to work on the guides, second by Mr. Massey. Chairman Thelander asked for additional discussion. Hearing none, Chairman Thelander asked to approve the motion; all approved. Motion passed.

### **Summary of Action Items and Next Steps**

Chairman Thelander said that the revisions to the guidebook and outreach have been discussed. Mr. Massey asked if the Committee would like to review the rule prior to submitting to the Governor's Regulatory Review Council. Chairman Thelander said that Committee members and other industry representatives review the final rules to ensure all of the changes have been incorporated. Mr. Thompson asked to verify when the rule actually goes into effect. Mr. Massey said the first reporting forms need to be submitted by March 1, 2013 and the rule goes into effect on January 1, 2012.

### **Adjournment**

Chairman Thelander adjourned the meeting at 12:50 p.m.